Fitting project management capability to strategy

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Abstract

Project management is now recognized as an organizational capability and there are numerous generic "maturity" models providing one size fits all approaches to what is considered to be "best practice." Both maturity models and best practices are problematic. Maturity models typically suggest that all firms must strive to progressively achieve prescribed levels of practice across the same range of "best" practices. But what constitutes best practice for whom and under what circumstances? If we look at an organization's project management systems, although they may have similarities across firms, they are operating in different contexts, driven by different strategies. What may be best for some may not be best for others.

The effect of different context and business strategies on focus and configuration of project management systems leads to the question: what configuration of organizational project management capability offers the best fit with specific markets and their strategic drivers? This paper presents results of research that begins to provide a basis for developing maturity and excellence models that are sensitive to context.

Introduction

Evidence supports the assumption that an increase in organizational project management capability is associated with improved project outcomes (Ibbs & Kwak, 2000; Cooke-Davies, 2002). Common sense alone suggests that investing in improvement of practices, processes, systems and people, and focusing attention on desired outcomes is likely to increase the chances of achieving desired results. It is therefore not surprising that many organizations have chosen to invest in development of their corporate capability to manage projects. In doing so, they look for guidance on what constitutes "best practice".

Numerous "maturity" models (Cooke-Davies, 2004a) offer guidance on what is considered to be good project management practice. But these models are generic, intended to be applicable to all organizations in all industry sectors. One of the best known of these maturity models, the Project Management Institute's OPM3®, has over 500 best practices with several thousand underlying capabilities. Implementing improvement in any of these areas requires considerable investment of both time and money. Few, if any, organizations have the resources, the environment or the appetite to implement everything that is required or suggested by these generic models. How do they know which investments will be most effective, and how much improvement is enough?

A major investigation into the value of project management (Thomas & Mullaly, 2008) identified the importance of fit between an organization's project management implementation, it's strategy, and internal and external context. There is also evidence that particular aspects of project management capability are better developed in some industry sectors than in others (Cooke-Davies & Arzymanow, 2003). This may be in part due to more recent adoption of project management in some sectors, but it may also be due to demands of the operating context, driving improvement of performance in some areas such as cost control, contract management or benefits realization at the expense of others.

A better understanding of what good project management practice looks like in different contexts would assist organizations in making decisions about resource effective investment in organizational project management capability. To address this need, research has been undertaken, with support from the Project Management Institute, investigating variations in project management systems, practices and outcomes across a range of industry sectors. As a part of this research, this paper presents results that provide insight into the fit between project management capability and corporate strategy. Following a brief literature based review of the concepts of fit, strategy and project management capability, the research methodology designed to explore the relationship between project related capability and corporate strategy is described.

The concept of fit

Generic standards for management of individual projects, and maturity or excellence models to assess and guide development of organizational project management can be a useful starting point for improvement of project management capability, but it makes little sense for a project or an organization to invest in project management systems that are not directly suited to the nature of their business.

A criticism of generic maturity models for organizational project management capability is that they assume "an ideal development path toward maturity that most organizations must follow most of the time, regardless of application area, project, and market environment or competitive strategy" (Cooke-Davies, 2004b, p.1252). Mullaly and Thomas (2010) with reference to the work of Miles and Snow (2003) point out that this contradicts observations from contingency theory that different configurations of organization systems and structure can be successful as long as they are consistent with their internal and external contexts.

Responsiveness to context is supported by a number of studies (Pinto & Covin, 1989; Cooke-Davies & Arzymanow, 2003; Besner & Hobbs, 2008; Crawford & Pollack, 2007) that have demonstrated variations in use of practices in management of different types of projects and in different markets or industries such as Engineering and Construction, Information Technology, and Financial Services.

One aspect of fit, proposed by Cooke-Davies, Crawford and Lechler (2009a) is that if an organization's project management capability fits with its strategy, then it will contribute strategic value to the organization. In other words, for each organization there will be specific strategic drivers which will influence the configuration of its structure and systems (Donaldson, 1987). These strategic drivers will also influence and be influenced by the market or industry sector in which the firm operates.

Contextual variation in the configuration of elements in the project management system according to business strategy is directly addressed by Srivannaboon and Milosevic (2006) who demonstrated that a company or business unit will select advantageous competitive attributes which will then "drive the different ways that projects are managed in terms of their foci and contents" (p. 500). This is demonstrated in the case studies presented by Srivannaboon and Milosevic and also in those described by Cooke-Davies, Crawford, and Lechler (2009).

Strategy

In order to research the relationship between project management capability and strategy, we need to have an understanding of what we mean by strategies that may be adopted by organizations and which, in combination with factors in the external environment, will give rise to associated strategic drivers.

The literature on management strategy is extensive, and there are many ways of categorizing strategies and deriving the underlying factors that drive success in achieving them. The field has produced many different tools since the SWOT framework of the 1960s suggested that organizations might utilize their strengths to respond to market opportunities whilst strengthening internal weaknesses so as to neutralize external threats e.g. Ansoff (1957). Through the best selling management book "In Search of Excellence" (Peters & Waterman, 1982) the McKinsey 7-S framework identified systems, style, staff, skill and shared values in addition to strategy and structure as seven variables that each needed to "fit" consistently with each other if a successful strategy were to result.

One of the best known categorizations of strategy is that proposed by Michael Porter who developed a method of analyzing competitors in any given industry by first identifying, and then mapping, strategic factors that distinguish clusters of firms competing in the same market, such as increased product differentiation or vertical integration to control the value chain (Porter, 1985). This formed the basis for Porter's generic strategies: cost leadership, differentiation and focus.

Another well known categorization of strategy is referred to by its originators, Treacy and Wiersema (1993), as value disciplines: operational excellence, product leadership and customer intimacy. They suggest that organizations will focus on one of these disciplines while meeting industry standards in the other two. By operational excellence they mean seamlessly providing reliable products and services at competitive prices. This strategy can be seen to incorporate cost leadership as proposed by Porter. Customer intimacy combines knowledge of the customer with responsiveness and operational flexibility to engender loyalty and repeat business. Product leadership involves innovation, providing customers with leading edge products and services. The Treacy and Wiersema categorization of strategies has been used in a number of studies in the project management field, notably research into the value of project management (Thomas & Mullaly, 2008) and more recently by Dietrich, Artto and Kujala (2010). Given the wide

acceptance and face validity of the value disciplines and previous use in project management studies, the Treacy and Wiersema (1993) categorization of strategies was adopted for this study.

Project management capability

So far in this paper the term project management capability has been used in the reasonable expectation that there will be a general acceptance and understanding of what is meant. Project management capability is a complex construct. It can only be measured by breaking it down into a number of constituent components.

Research shows that in order to be successful, firms must develop specialized capabilities, including strategic know-how, human resources, knowledge and experience, and business processes (e.g. Penrose, 1959; Richardson, 1972; Teece & Pisano, 1994; Barney, 2002; Grant, 1996; Leonard, 1998; Prahalad & Hamel, 1990; Hamel & Prahalad, 1994; Brusoni, Prencipe, & Pavitt, 2001). It is only when these capabilities are effectively coordinated and collectively applied that organizations perform well. Davies and Brady (2000) were the first to argue that project capabilities ranked alongside the 'normal' strategic and functional capabilities identified by Penrose (1959) and Chandler (1990). There is, however, little empirical data presenting a collective view of the capabilities required for developing and delivering projects in general. What there is tends to follow the content of generic standards for individual projects or focus on mechanistic capability maturity models (Cooke-Davies, 2004a).

For the purposes of this research, the existence and usage of elements of a project management system developed by the organization (a top-down view) is used to represent project management capability. Based on the work of Cooke-Davies, Crawford and Lechler (2009b) looking at project management systems, and that of Besner and Hobbs (2008) investigating the use of "tools" valued and used on different types of projects, nineteen potential elements of an organization's project management system were identified. These nineteen sets of practices are listed in Appendix A.

Research Methodology

In order to better understand one aspect of context and assist organizations in making decisions about investment in project management improvement, research was designed to investigate the relationship between corporate strategy and project management capability.

A previous qualitative study (reference withheld for blind review) provided input to design of a questionnaire that was completed by people in executive management positions in organizations across a range of industry sectors. Only results for Engineering and Construction, Financial Services, Government, and IT / Telecommunications are reported here. In addition to demographic information, respondents were asked to indicate the importance of a number of drivers in terms of their organization's strategy. They were then asked to identify which, in a list of project management related processes, were in place in their organization. A specific strategy was to access the views of senior managers rather than the project management community.

Sample

The primary source of data was a commercially provided survey "panel" of potential respondents. The panel provider (MarketTools) ensures that all prospective survey-takers are who and where they say they are and they verify respondent information with a process that utilizes validation technologies similar to those used to help prevent credit card fraud and identity theft. They also ensure that no respondent can enter a survey twice. A disadvantage of this data source was that the only market large enough to give us access to the specific demographic required for this survey was the United States. This method of accessing respondents did, however, give us access to "senior managers" as can be seen from the profile of respondents for the total sample of 344 responses of which 40.1% are currently in General Management roles and 23.3% in Project Management roles (Figure 1). Industry distribution of the sample is shown in Figure 2.

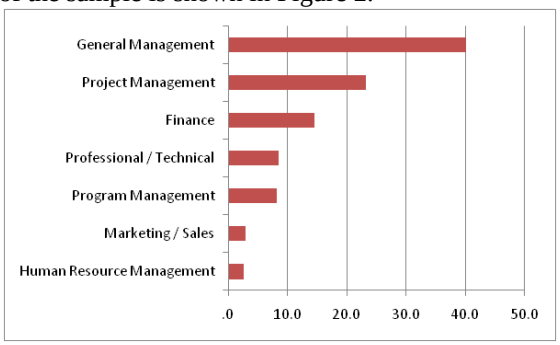

Figure 1: Primary focus of current role

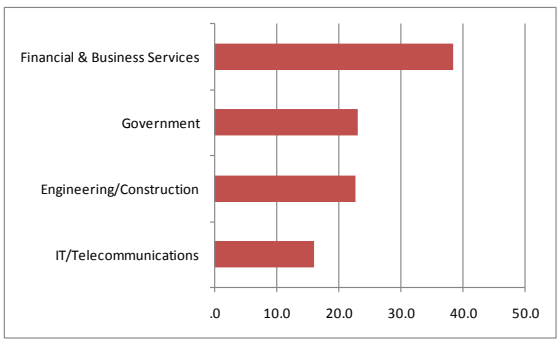

Figure 2: Industry distribution of the sample

Strategies

Based on Treacy and Wiersema's value disciplines, strategies pursued were assessed by asking participants to indicate the importance to their organization of the following items on a scale of 1 to 4, where 1 is not important at all and 4 is critically important. All three scales had sufficient reliability with Cronbach's Alpha greater than 0.6 (Hair, Tatham, Anderson, & Black, 1998).

Operational Excellence
• Cost effectiveness • Execution performance • Reliability of end product Cronbach's Alpha: 0.691
Customer Intimacy
• Customer focus • Adding value for customers • Repeat business Cronbach's Alpha: 0.722
Product Leadership
• Development of unique technology / expertise • Technological innovation • Product innovation Cronbach's Alpha: 0.811

Figure 3: Three strategies or value disciplines

As Treacy and Wiersema (1993) say, organizations will focus on one of these disciplines or strategies while meeting industry standards in the other two. Overall, for this sample, Operational Excellence and Customer Intimacy are considered as more important strategies than Product Leadership (**Error! Reference source not found.**).

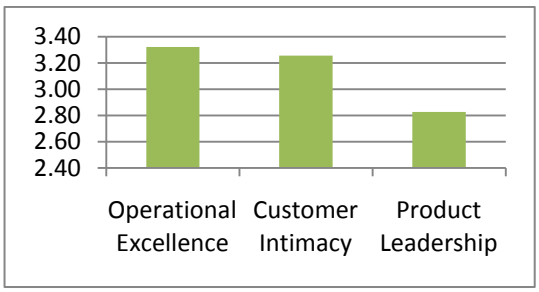

Figure 4: Relative importance of strategies

It is interesting however to see the variation in importance by industry sector (Figure 5). Operational Excellence is important in all sectors but Customer Intimacy is most important in Finance and Business Services. Understandably, Product Leadership is strongest in IT/Telecoms, but this sector is also the most strongly driven by all three value disciplines. The lower levels of importance of all three strategies in the government sector can be seen as a confirmation that the public sector is effectively non-competitive and therefore less concerned with strategy as represented by the Treacy and Wiersema model.

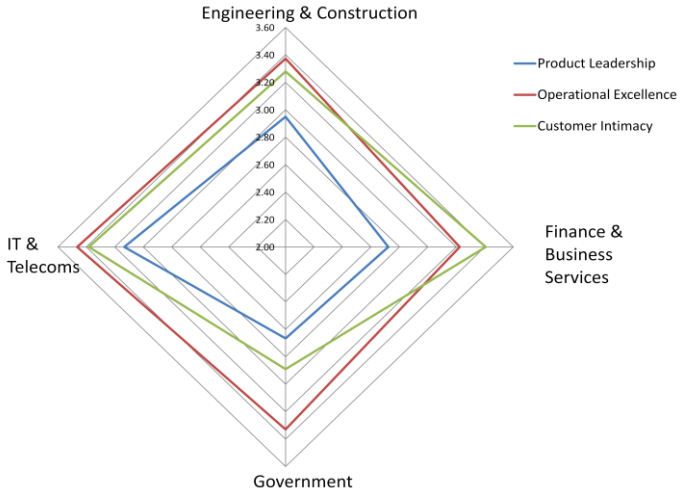

Figure 5: Importance of strategies by industry sector

Use of Project Management Tools and Practices

Presented with nineteen potential elements of an organization's project management system (see Appendix A), respondents were asked to indicate which of these elements were in place in their organization. Figure 6 presents the nineteen elements in descending order according to the percentage of the sample that indicated that they were in use in their organization. The appearance of Risk, Contracts, Quality, Cost, Time and Process Management, and Performance Metrics in the upper level of usage by organizations is not unexpected. Use of Program Management by over 50% of the organizations represented in the sample is more surprising but, given the high percentage of responses by those in general management positions, is consistent with an understanding of program management as an approach that draws on both general and project management personnel and practices. Specific processes for organizational change management (21%) may only be considered necessary in environments subject to significant change. More surprising is the very low level of use of Stakeholder Management (18%).

Figure 6: Percentage of organizations with specific project related processes in place

Analysis

Having identified the importance of specific strategies and the use by organizations of specific project related processes, the next step in addressing the research question is to establish whether there is a relationship between the two. To do this, a series of ANOVAs were conducted, to identify significant differences between use of specific practices relative to the importance of each of the three strategies. The results of this analysis are presented in **Error! Reference source not found.**. The shading in the table represents the degree of significance at $P<0.05$. The darkest shaded cells have the highest significance and those with lightest shading have the lowest level of significance. Where there is no shading, there is no evidence of significant difference between use of the practice and importance of the strategy. The right hand column shows the percentage of respondents indicating that their organization uses the project related practice, process or tool. Even where there is no statistically significant difference in presence of practices, the general trend in the data is that the higher the importance placed on the strategy, the more likely the organization is to use the practice identified. Where significant differences are indicated, this means that if the organization considers a particular strategy critically important, there is a strong likelihood that they will use the practice indicated.

Practice	Operational Excellence	Customer Intimacy	Product Leadership	% with practice present
Program Management			0.002	52.33%
Risk management	0.013	0.029		47.38%
Contracts Management	0.002	0.037		43.60%
Quality management		0.008		42.44%
Performance metrics	0.016			41.57%
Project cost management		0.002		40.99%
Project time management				38.95%
Process management	0.008	0.005	0.002	36.63%
Portfolio Management		0.001		35.47%
PM methods and methodologies		0.002	0.002	32.85%
Benefits Management	0.037			31.69%
Change Control Processes	0.001	0.013		29.65%
PM development and career paths				29.07%
Project templates and guidelines		0.007	0.010	26.74%
Requirements management	0.001			26.45%
Support and tools for project management			0.001	25.87%
Value management		0.001	0.011	23.84%
Organizational change management				20.64%
Stakeholder management				18.02%

Figure 7: Significant differences (P<0.05) in use of project related practices by strategy

Discussion

The trend towards increasing likelihood of use of all practices with increasing importance of all strategies, as shown in this data, indicates that the stronger the strategic focus of an organization, the more likely they are to implement project management practices, processes and tools. This provides support for the views of Jamieson and Morris (2004) and Dietrich and Lehtonen (2005) among others, who suggest that projects and programs are vehicles for the implementation of strategy. It also indicates that this is recognized and addressed by those organizations that consider strategy execution important.

Operational Excellence

Overall, those organizations that consider Operational Excellence critically important are most likely to implement the widest range of project related practices. A notable exception is Portfolio Management. Figure 8 shows the nature of the difference in presence of Portfolio Management by strategy and provides an illustration for better understanding of the nature of the differences presented in **Error! Reference source not found.**. Although there is a slight tendency towards higher likelihood of Portfolio Management being present rather than not present, the difference is smaller for those concerned with Operational Excellence and Product Leadership than it is for those that consider Customer Intimacy critically important. Industry sector is relevant. Portfolio Management practices are least used by the Government (9%), Engineering and Construction (23%) and IT and Telecommunications (38%) and most used by Finance and Business Services (60%).

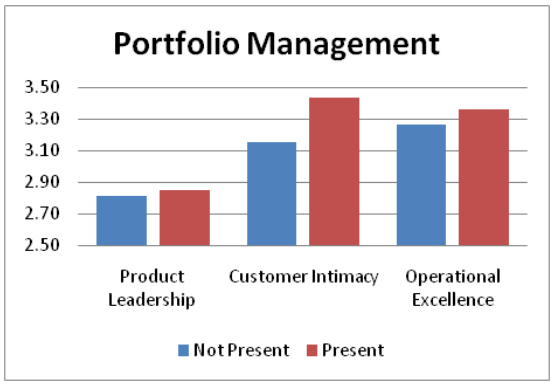

Figure 8: Presence of Portfolio Management by Strategy

Also notable, is the significantly high likelihood of presence of Program Management where Operational Excellence is considered critically important, especially as Program Management is the set of practices used by the highest percentage of organizations represented.

Benefits Management is only used by 32% of organizations. There is no significant difference between use of Benefits Management practices in those organizations identifying Customer Intimacy and Product Leadership as critically important, but amongst those organizations pursing Operational Excellence strategies there is a higher likelihood that they will use Benefits Management practices. This is consistent with the concept of operational excellence as optimizing "business processes across functional and organizational boundaries (Treacy & Wiersema, 1993, p.85).

Because benefits management transcends the boundaries of individual projects, the concept of programs and portfolios are needed to act as bridges between the temporary world of projects and the permanent world of business as usual. This divide has always been an awkward one for organizations to manage however successful benefits management processes offer significant opportunities for value to be added to the business in support of strategy delivery as strategies are implemented by undertaking a number of projects, often through programs, in order to achieve specific strategic benefits. What this demonstrates is a need for industry and academia to develop and test ways in which benefits management can be implemented successfully.

As a starting point for further investigation, taking contextual factors, beyond strategy, into account, these results indicate that Benefits Management is used significantly more in Finance & Business Services (38%), Government (33%) and IT & Telecommunications (33%) than it is in Engineering and Construction (19%). There is also evidence that it is most likely to be used in internal projects with intangible outcomes in the Finance & Business Sector. This points to a relationship between use of Benefits Management in the delivery of services rather than products.

Customer Intimacy

Evidence from the workplace and the qualitative (interview-based) phase of this study identify Program Management, Benefits Management and Organizational Change Management as practices widely used in the Finance and Business Services sector. Given that Customer Intimacy is identified as the most important strategy for Finance and Business Services (Figure 5) it is interesting that Program Management, Benefits Management and Organizational Change Management are the only sets of practices that are not shown to be significantly more likely to be present in association with Customer Intimacy strategies. Exploring this further, if the Government sector, which places lower emphasis on Customer Intimacy than the other sectors, is removed from the analysis, these three sets of practices are significantly more likely to be present than not present across the rest of the sample for whom Customer Intimacy is critically important. Given that Benefits Management is more likely to be associated with delivery of internal projects, and that there is a strong association of Program Management with Operational Excellence, it would be reasonable to conclude that these three areas are more internally focused, enabling practices and therefore more closely associated with Operational Excellence than with a strong focus on the customer.

Although provision of PM development and career paths is evident in under 30% of the organizations in this sample, it is more likely to be used in organizations for which any of the three strategies are critically important. For Customer Intimacy this suggests a relationship between well trained and motivated staff and customer satisfaction.

Product Leadership

Difference in presence of practices amongst those organizations for which Product Leadership is important is particularly interesting. Product Leadership is a weaker strategic driver overall than either Operational Excellence or Customer Intimacy across all sectors (see Figure 5). Those areas of practice that are more likely to be present where Product Leadership is critically important tend to be related to support such as Process management, PM methods and methodologies, PM development and career paths and Support and tools for project management. The results become

even more interesting, however, when the Government sector is removed from analysis. When this is done the trend towards higher likelihood of usage of project related practices, processes and tools holds true except for the use of Portfolio management and Risk management amongst those organizations for which Product Leadership is critically important. While the difference is not statistically significant, it is slightly less likely that Portfolio and Risk management practices will be used in those organizations that report Product Leadership as critically important. This may be explained by the balancing act Product Leadership focused organisations must master between the reality of needing to control cost and time and the necessity for leading edge creativity and innovation This, combined with the higher likelihood to provide supportive rather than controlling practices, indicates a difference in approach where innovation is required that warrants further investigation.

Conclusions

The results of this research clearly indicate a relationship between the importance of strategy to an organization and the breadth of project management practices they implement. This supports the proposition that project and program management are vehicles for the delivery of strategy in organizations. Overall, the more critically important all or some of the three strategies, Operational Excellence, Customer Intimacy and Product Leadership are to an organization, the wider the range of project management practices they are likely to implement.

Strategy is only one of a number of contextual factors that are likely to influence the goodness of fit of the configuration of project management systems for a particular organization. However, as an input to decisions concerning the allocation of scarce resources to improvement of corporate project management capability that will best fit with strategy, these results provide some guidance.

Where Operational Excellence is a strong driver, there are indications that the widest range of project management practices is most likely to be used. Portfolio Management, the benefit of which is likely to be dependent upon contextual factors other than strategy such as industry sector, shows the weakest association with this driver.

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